AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-4. (Cancelled).

Claim 5. (New) A communication system comprising a transmission apparatus for transmitting a signal at plural types of transmission rates, and a reception apparatus for receiving the transmitted signal, wherein:

the transmission apparatus comprises:

signal generation means for generating a signal to be transmitted into which pilot symbols which are predetermined patterns have been inserted, such that a ratio that the pilot symbols appear in the signal becomes a value responsive to a transmission rate of the signal; and

transmission means for transmitting the generated signal, and

the reception apparatus comprises:

reception means for receiving the transmitted signal; and

coherent detection means for carrying out coherent detection by using the pilot symbols included in the received signal.

Claim 6. (New) The communication system as claimed in claim 5, wherein the signal generation means generates the signal to be transmitted into which the pilot symbols have been inserted, such that the ratio that the pilot symbols appear in the signal becomes a substantially optimum value in consideration of both accuracy of coherent detection by using the pilot symbols and transmission efficiency of the signal.

Claim 7. (New) A transmission apparatus for transmitting a signal at plural types of transmission rates, comprising:

signal generation means for generating a signal to be transmitted into which pilot symbols which are predetermined patterns have been inserted, such that a ratio that the pilot symbols appear in the signal becomes a value responsive to a transmission rate of the signal; and transmission means for transmitting the generated signal.

Claim 8. (New) The transmission apparatus as claimed in claim 7, wherein the signal generation means generates the signal to be transmitted into which the pilot symbols have been inserted, such that the ratio that the pilot symbols appear in the signal becomes a substantially optimum value in consideration of both accuracy of coherent detection by using the pilot symbols and transmission efficiency of the signal.

Claim 9. (New) A transmission method for transmitting a signal at plural types of transmission rates, comprising:

a signal generation step of generating a signal to be transmitted into which pilot symbols which are predetermined patterns have been inserted, such that a ratio that the pilot symbols appear in the signal becomes a value responsive to a transmission rate of the signal; and

a transmission step of transmitting the generated signal.

Claim 10. (New) The transmission method as claimed in claim 9, wherein the signal generation step generates the signal to be transmitted into which the pilot symbols have been inserted, such that the ratio that the pilot symbols appear in the signal becomes a substantially

optimum value in consideration of both accuracy of coherent detection by using the pilot symbols and transmission efficiency of the signal.